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Under glaring lights Anderson Ranch Dam is being raised to meet spring floods.

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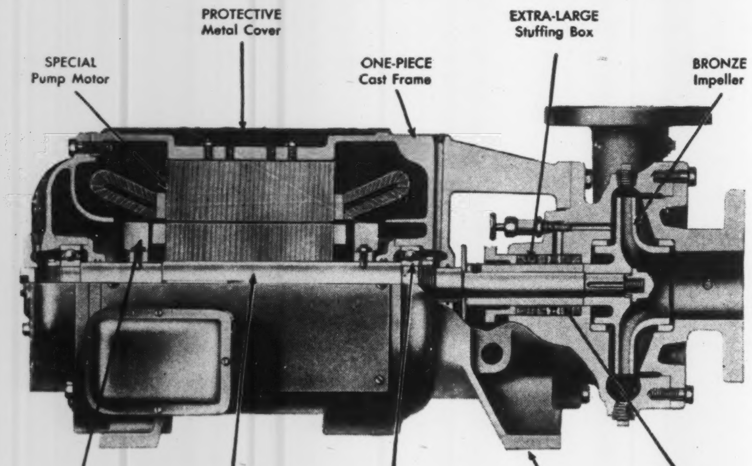
# X-Ray View

## Shows Why A-C's Smooth-Running Electrifugal Pump is the Finest of its Kind!

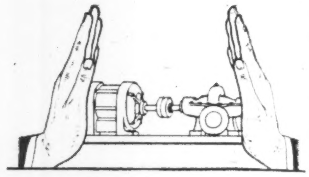

PROTECTIVE Metal Cover
SPECIAL Pump Motor
ONE-PIECE Cast Frame
EXTRA-LARGE Stuffing Box
BRONZE Impeller
ALUMINUM Cooling Fans
ONE-PIECE Steel Shaft
HEAVY-DUTY Ball Bearing
STURDY FEET Cast in Frame
BRONZE Shaft Sleeve

TOP QUALITY and extra value — that's what A-C's Electrifugal Pump gives you in terms of performance and economy! X-ray view above shows how Allis-Chalmers engineering has magically combined pump-and-motor into a single compact unit — which takes less space, gives you smooth operation with maximum protection against dangers of abnormal wear, leakage, corrosion, vibration! Consider these outstanding features: One-piece frame saves 33% in space; one shaft for pump-and-motor assures alignment; splash-proof motor is specially designed for pumping at low power cost. For further details on this great pump, call your nearby A-C office, or write ALLIS-CHALMERS, MILWAUKEE 1, WISCONSIN.

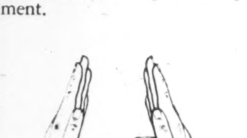
**HEAR THE BOSTON SYMPHONY:** *Saturday, American Broadcasting Co.*

A 1924

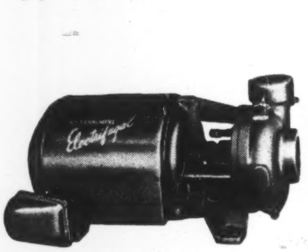
## SQUEEZE PLAY CUTS SPACE 33%!



**PROBLEM:** Here is conventional pump and motor. How can we couple them together *better*—to save space, increase stability, and provide rigid alignment.



**SOLUTION:** We design a new kind of pumping unit—the one and only "Electrifugal" Pump! Motor and pump are now on one shaft—which cuts space 33%, assures alignment and smooth operation. No wonder "Electrifugals" give you more pumping power for your money!


Electrifugal

**SEA-BLUE BEAUTY:** Modern design of Electrifugal Pump looks well on jobs anywhere! Capacities from 15 to 1600 gpm—heads up to 500 feet.

**ALLIS-CHALMERS** *Electrifugal* **PUMPS**

# The Week In Engineering and Construction

ENGINEERING NEWS-RECORD • OCTOBER 25, 1945 • VOLUME 135 • NUMBER 17

## Truman asks $272 million for construction finance

### Huge flood control and irrigation programs to be started, with four dams in Mississippi Basin—PRA, CAA, FWA and Boundary Commission included

Appropriations totalling $271,842,000 for construction and planning by the U. S. Army Engineers, the Bureau of Reclamation and the Federal Works Agency were requested of Congress last week by the President.

This money would permit the resumption of numerous construction jobs shut down because of the war, and the start of the huge postwar construction programs planned by these three agencies, including the development of the Missouri River Basin.

The money is desired for the remainder of the fiscal year 1946, which ends next June 30. Requests for large sums for the fiscal year 1947 should be forthcoming in a few months.

Earlier in the week the President also asked for an appropriation of $25,000,000 for the Public Roads Administration to meet the early requests by the state highway departments for the federal aid provided in the 1944 Highway Act. Five hundred million dollars of federal highway help became available early in October when Congress declared the act effective (*ENR* Oct. 11. vol. p. 463).

#### Big fund for army engineers

The President's earlier request also included $3,998,000 for the Civil Aeronautics Administration for construction work at the National Airport, Washington, D. C., and for $1,641,000 for the International Boundary Commission. The latter money is sought because the Mexican Senate has approved the Mexican Water Treaty (*ENR* Oct. 18, vol. p. 483). After a formal exchange of ratification notes by the Presidents of Mexico and this country, prompt planning of the international dams and other works to be built will become necessary.

Funds requested for the Corps of Engineers total $128,475,000, which would permit a major start on the four billion dollar rivers and harbors and flood control program the Army is planning. Of the money now sought $85,159,000 is earmarked for general construction work on various flood control projects, including some once started and then shut down because of the war.

A sum of $15,000,000 for flood control on the Mississippi River is also requested, as is $2,800,000 for preparation of plans for general flood control work.

A total of $24,316,000 is sought for rivers and harbors construction. The larger of these projects and the amount to be spent on each were listed in *Engineering News-Record* for Oct. 11, vol. p. 469.

The request for the Bureau of Reclamation totals $93,367,000. All of this sum is designated for the prosecution of specific construction projects, except $5,000,000 for investigations and surveys, $5,531,242 for the preparation of detailed plans and specifications, and $1,000,000 for salaries and expenses of the staff.

The appropriation requested for the general construction fund of the bureau totals $61,335,000. Included in this sum is $10,000,000 to permit the agency to go ahead with Davis Dam, which is required to be built within five years, as part of the Mexican Water treaty. The remainder of the general construction fund is to be spent on the following projects:

Central Valley, $18,500,000; Columbia Basin, $11,000,000; Colorado-Big Thompson, $7,683,000; Gila, $2,000,000; Tucumcari, $2,000,000; Lugert-Altus, $2,020,000; Anderson Ranch Dam, $1,925,000; Yakima, $1,650,000; Hungry Horse Dam in Montana, $1,500,000; Palisades project in Idaho, $1,000,000; San Luis project in Colorado, $1,000,000; Provo River, $860,000; and Kings River project in California, $197,000.

(*Continued on p.* 12)

## Private construction rise continues

Adding greater impetus to the steady upswing in construction, private industry last week continued to announce major building plans. Among the projects listed as ready or already under way were:

A $20,000,000 program announced by the Standard Oil Co. of California, which included $15,000,000 in refinery expansion and improvement at Richmond and El Segundo, new warehouse and shipping facilities and modernization of service stations and marketing plants throughout the company's sales territory. The Richmond work, which will include a $2,000,000, 7-story process laboratory, was awarded to Parker, Steffens & Pearce of San Francisco.

Several major projects were made public at Rochester, N. Y., where the Bond Clothes, Inc., announced plans for a $5,000,000 manufacturing plant, and the Rochester Institute of Technology said it had a $1,250,000 expansion program under way. Another Rochester job, on which the architects are Kaelber & Waasdorp, is a $1,000,000 Rochester Telephone Corp. building.

At Lexington, Ky., preliminary grading operations have been started for a $4,500,000 steam electric generating plant on the Kentucky River near Tyrone for the Kentucky Utilities Co. The work is being resumed after a 4-year delay caused by wartime restrictions. At Toledo, Ohio, the New York Central Railroad said it had appropriated $3,500,000 for construction of a terminal and terminal facilities in the city's downtown section. In Wilmington, Del., the E. I. duPont de Nemours Co. announced plans for an 18-story, $3,000,000 office building to be erected at Tenth and Tatnall Streets as an addition to the company's present office building. In Pittsburgh, Pa., the Allegheny Ludlum Steel Corp. announced plans for immediate erection of an ultra modern $2,000,000 research laboratory near its present headquarters plant which is located at Brackenridge, Pa. north of Pittsburgh.

## Name General Weaver to head supply division

Brig. Gen. Theron DeWitt Weaver, formerly chief of the production division, office of the Chief Engineer, U. S. Forces European Theater, has been named Director of Military Supply, Office of the Chief of Engineers.

General Weaver succeeds Brig. Gen. R. C. Kuldell, who recently retired to resume his civilian position as president of the Hughes Tool Co., of Houston, Texas.

General Kuldell was a West Point graduate in 1912 and was commissioned in the Corps of Engineers that year. He served through World War I, and resigned his commission in 1920. He rejoined the corps in 1942 as a lieutenant colonel, receiving his general's star Nov. 13, 1944.

General Weaver is an electrical engineering graduate of the University of Michigan. Joining the Army in May. 1917 as a second lieutenant of Engineers, he served through the first war, and has since remained on active service. He became district engineer in charge of Bonneville Dam in July 1937, and in 1940 was made chief of the construction division of the Assistant Secretary of War. He served overseas from September, 1944, until entering his new assignment.

*T. D. Weaver*

*R. C. Kuldell*

Both men are holders of the Distinguished Service Medal.

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## American engineers study Philippine roads

A field study to determine the extent to which the highways, bridges and essential streets of the Philippine Islands have been damaged during the war, and to estimate the amount of repair and replacement work necessary in rehabilitation has been authorized by President Truman. The work began in September under the direction of Thos. H. MacDonald, Commissioner of Public Roads. A party of eight engineers, seven of them regular employees of the Public Roads Administration on furlough for war service and now detailed back to Public Roads, arrived in the Philippines on Sept. 18.

President Osmena, Army and Navy forces and the Philippine Bureau of Public Works are cooperating.

The party is headed by Lieut. Col. Arthur J. Siegle, assisted by Comdr. B. M. French, who will have charge of contacts with Navy groups. Other members of the party are: Lieut. Col. Robert H. Paddock, Maj. L. D. Asmus, Maj. K. B. Foster, Philip Mervyn Stephenson, a civilian employee of the Army with an Engineer Technical Intelligence Team, who is an experienced bridge engineer and on leave from Oregon State Highway Department, and from the Navy, Lieutenants John Clarkeson and James L. Shotwell.

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## TVA headquarters move awaits new construction

The proposed move of the Tennessee Valley Authority headquarters offices from Knoxville, Tenn., to the Muscle Shoals area in Alabama has been delayed, chiefly because of lack of buildings and other facilities at Muscle Shoals, according to a statement of TVA Chairman David Lilienthal in a letter to Representative Sparkman of Alabama made public last week. Although the headquarters offices have been in Knoxville since TVA was formed, the original act specifies the Alabama location.

If planning funds requested of Congress in its 1947 budget are granted, the design of necessary buildings for housing board members and the central management staff can proceed and a well ordered schedule of construction and transfer of offices can be started. Such a program has been delayed because of the urgency of war needs.

Already designed is a new chemical building for the nitrate plant at Muscle Shoals. An office building is probably the next to be considered. Residential housing for office personnel is at present lacking, and TVA expects to follow its policy of depending upon private enterprise for such construction.

## Rude and Garner retire from survey posts

The U. S. Coast and Geodetic Survey last week announced retirement of the chiefs of two of its divisions.

Capt. Gilbert T. Rude, Chief of the Division of Coastal Surveys, retires after 42 years' service with the survey. The second retirement is that of Capt. C. L. Garner, Chief of the Division of Geodesy since 1937.

*G. T. Rude*

*C. L. Garner*

Captain Rude is succeeded by Commander Raymond P. Eyman and Captain Garner by Lt. Commander H. W. Hemple.

Captain Rude, who holds the Norman medal of the American Society of Civil Engineers, has served in many important capacities in the United States, Philippine Islands, and Alaska, and as representative of the survey at meetings of the International Hydrographic Bureau at Monaco. Among his contributions to nautical science are the Rude-Fischer pressure sounding tube and the Rude portable automatic tide gage, and the Rude Star Finder is standard navigational equipment on Navy vessels. Captain Garner, who spent 22 years in field surveys of hydrography, triangulation, and gravity, and 8 years as assistant chief of the Division of Geodesy, has taken an active part in scientific and engineering societies.

*R. P. Eyman*

*H. W. Hemple*

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# Navy to finish San Diego aqueduct despite easing of war-born demand

## Navy had considered dropping financing of project but new agreement with city now assures completion

Although it had been proposed to can-el construction contracts for a 71.6-mi. queduct to bring Colorado River water o war-crowded San Diego, Calif.—in iew of the end of the war and the omewhat reduced requirements of the ederal government—the Navy Depart-ent now plans to complete the project. he Bureau of Yards and Docks will upervise construction.

Completion of the work was assured ct. 17 when an agreement between the avy and the city was reached, to per-it the completed aqueduct to be rented the city in order to repay the federal overnment for the major part of its in-estment.

Because the project was started only ept. 12 (*ENR* Sept. 27, vol. p. 407), ttle work has been completed in the eld, although extensive commitments ave been made. The Navy reportedly onsidered it possible to reduce military perations in the San Diego area suffi-iently to eliminate any need for the ederal government to complete the queduct. However, because of the ex-nsive military construction in the San iego area and the heavy war burden laced on that city, the federal agencies nvolved felt obligated to consider every ossible method of completing the work. he outcome was the contract signed st week in Washington by Vice Adm. en Moreell, chief of the Bureau of ards and Docks, for the Navy, and ity Manager F. A. Rhodes, acting for e city.

Under the agreement, San Diego will ay a yearly rental of $500,000 for a eriod not to exceed 32 years. The ity also has an option to buy facilities t any time it desires.

### City can transfer rights

Provision has been made whereby the ity can transfer its rights under the ew contract to the San Diego County ater Authority. Also, the city can ansfer to the Metropolitan Water Dis-ict, its rights on the 32 mi. of the queduct that lie outside of San Diego ounty, should such an arrangement be ecided upon at some later date.

Next step in the ownership negotia-ns will be acquiring membership in e Metropolitan Water District by the ty and the San Diego County Water uthority. This can be done by paying back taxes, amounting to about $11,-0,000, and the current assessment of 50 cents per $100 of valuation of property that lies within the San Diego district.

The back tax figure will be reduced, however, by the approximate amount of the cost of the 32-mi. portion of the aqueduct which will be constructed in the Metropolitan Water District's territory outside of San Diego County, because original terms for membership in the metropolitan district included construction of an aqueduct to the San Diego County line. How the San Diego authority will finance its entry into the metropolitan district has not been decided, but some financing program will have to be worked out, as no funds are in reserve and available for such action at this time.

### Plans by Reclamation Bureau

General plans for the aqueduct were prepared by the Bureau of Reclamation. The conduit, which will have a capacity of 50 mgd., will connect the Metropolitan Water District's line on the San Jacinto River with San Vincente Reservoir a few miles northeast of the city. The pipe will vary in size from 42 to 93 in.

Total estimated cost of the work was originally placed at $17,400,000 but it is now believed that the project can be completed with an expenditure of $14,-500,000. Of this cost, 70 percent will be supplied by the Navy, 20 percent by the Federal Works Agency, and 10 percent by the Army. The Navy, with Capt. Alden F. Fogg, Public Works Officer for the 12th Naval District, in charge, will act as the supervising agency for all operations.

Contracts totalling about $8,900,000 have already been awarded. Contracts are expected to be awarded in a few days for a large amount of concrete pipe estimated to cost $3,300,000. Bids for the steel siphons and miscellaneous structures expected to cost $575,000 will be opened Oct. 24. The entire project is scheduled to be completed late in the spring of 1947.

◆

Work on the piers for the new 4-lane Mississippi River bridge at Memphis, Tenn., has been stepped up to two shifts a day. By the middle of this month it is expected that work will be placed on a 24 hours a day basis with upwards of 700 men employed by Merritt Chapman & Scott, who are building the seven piers and the Memphis abutment.

Two years will be required to complete the bridge.

# J. A. Jones to build road through the Andes

The J. A. Jones Construction Co., of Charlotte, N. C., which built the gaseous diffusion plant at Clinton Engineer Works, has been given a contract to build 100 miles of modern road through the Andes Mountains in Ecuador.

The lump-sum contract, for more than $2,000,000, is with the Ecuadorian government.

The highway will form an important section in the Pan-American Highway, and will extend from Quito, the capital, to the border of Peru. It will be a double-lane macadam road, that will follow approximately the route of a narrow-gage railroad that winds through the 10,000-ft. mountains.

According to John D. Watson, chief engineer of the company, who made a tour of inspection of the area last spring, construction will require about two years. John Doucha, assistant project manager for J. A. Jones at Oak Ridge for more than a year, is now on the site, and will be in charge of construction. Between 30 and 40 of the Oak Ridge employees of the company eventually will go to Ecuador.

# Unregistered architect denied fee by Minn. court

In the first action of its kind under a new Minnesota state regulatory law for architects, engineers and land surveyors, the court of Ramsey County denied to Mark Fitzpatrick, a St. Paul architect any damages in an action he brought to collect fees for plans and specifications for an apartment building alteration.

In denying damages, the court said that Fitzpatrick was not registered under the new law, and therefore could not legally prepare such plans.

Under the registration law, it is provided that the engineer or architect directly responsible for preparation of each drawing in a set of plans must sign that plan as a registered professional engineer or architect, as the case may be. Failure to comply with the law is considered a gross misdemeanor with severe penalties attached.

According to the weekly bulletin of the Minneapolis Builders Exchange, the law is meant to force into the public view the man actually responsible for designs, and to prevent the use of designs made by materials suppliers.

# H. W. Richardson . . .

# On Japs, and planes and hurricanes

***TOKYO, Sept. 21, 1945***

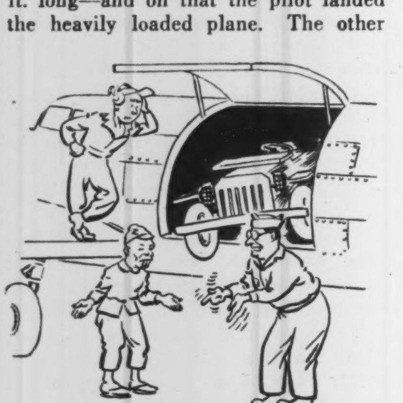
**Dear Staff:** This will explain my silence for the past week—and reasons why I'm cured of any desire to tour the Orient in the future.

It all started Saturday, Sept. 15, when a group of 14 correspondents and Army public relations men shoved off from Tokyo at 7 a.m., in three jeeps and two combat cars, headed for Atsugi airport—35 miles away. That ride from Tokyo to Atsugi is a dinger—a soul-shattering, spine-jolting teeth-chattering ordeal over the world's roughest, narrowest and dustiest road.

At Atsugi, we were told that the Air Corps had two jeeps loaded in two planes (C-47's) for us. There were to be three planes in all—one carrying correspondents, one carrying food for released prisoners of war, and one to carry a prisoner rescue party. So all 14 of us, along with four of the plane crew, our jeep (it weighs 1¼ tons), 500 lb. of rations and an emergency gas pump, got into one plane—affectionately named "Dottie" (and more of "Dottie" later).

**Jeep unloading problems**

We were the first to arrive at Omura airport, which serves Nagasaki although it's 25 miles from what's left of that city. The landing strip was grass—all grown up so that possible bomb craters and rough spots were not visible. The only paved strip was an asphalt apron about 700 ft. long—and on that the pilot landed the heavily loaded plane. The other two planes came in right behind us.



". . . it was quite a procedure"

We soon found the whole setup was Snafu. The man in charge of the prisoner deal was a full colonel—and our highest ranking escort was a captain. We were told the two jeeps, including the one in our plane, belonged to the Colonel and his party—but he graciously assigned one to us after we did some mighty loud squawking.

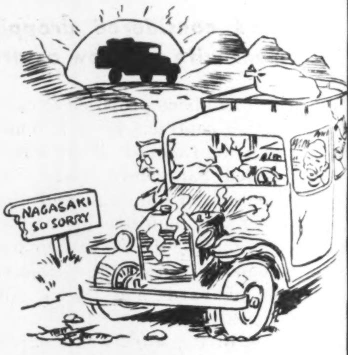
Then we found no one had brought along any unloading ramps to handle the jeeps. So we had to round up a Jap truck, back it up to the door of the plane, and manhandle the jeep from plane to truck. Then we backed the truck up against the roof of a bomb shelter, ran the jeep off, moved the truck and then ran the jeep off the shelter roof. Quite a procedure, especially with Jap labor and truck drivers who didn't understand English.

Then we were stumped for transportation to Nagasaki. We finally rounded up a charcoal-gas burning Jap bus—a mighty sorry affair—which, with the two jeeps, gave us enough transportation for the personnel. The prisoner rations were loaded onto the Jap truck, which we commandeered along with the bus and two Jap drivers. We started out in great style as a convoy, with the Colonel and his party in one jeep tearing out ahead—he said he wanted to get to Nagasaki before dark. The truck went next, then the bus, and finally six correspondents followed along in the second jeep.

**Strange convoy**

The Tokyo-Atsugi road was a boulevard compared with that Nagasaki road. Even so, steep and winding, full of chuck holes, so narrow two vehicles couldn't pass in places, it was about the sorriest excuse for a highway I ever saw. The bus couldn't negotiate many of the grades, but we always found enough Japs to shove us up the hills.

About half way in, the road improved somewhat, for that section connected Nagasaki with an army camp—but the transportation started to disintegrate. First the truck broke down, and we commandeered two more to haul the rations. Then we found the Colonel's jeep with a flat tire and no spare—so he and a couple of his party climbed aboard our jeep carrying the flat tire. Then the bus broke down—or rather ran out of charcoal—and it took an hour to find more fuel. By that time it was dark, and we got gloriously lost getting through Nagasaki.



". . . We started in great style"

I'm not going to try to describe the results of the bomb at Nagasaki, for I've written a long story about it. (*ENR*, Sept. 27, vol. p. 397.) But all reports of the terrible effect of the bomb have not been exaggerated.

We wangled a big truck from the Marines, and with one jeep carrying the overflow, the Press party started back to Omura about 10:30 a.m.

That take-off was something. The pilot taxied the plane to one end of the apron, opened up the engines to almost full power, then released the brakes. We literally shot into the air. The radio man was just entering the forward compartment when we took off and he was catapulted clear back to the rear end of the cabin.

But we got off the ground all right and headed for Kanoya, about 100 miles to the south for gas, as we didn't have enough to get back to Tokyo. The other two planes took off right behind us. The weather really got bad, and our pilot dropped down to fly by ground contact along the coast.

After we were gassed up, the weather reports began to come in, reporting a typhoon headed our way from Okinawa (Kanoya is on the southern tip of Kyushu, the southermost main Jap island). So we were grounded, with no indication of when we would ever get off.

The Air Corps put us up in a so-called transient camp. Kanoya was a J p naval air base—their Pensacola—which we had wrecked by bombing. The transient camp had been set up in a bombed-out wooden two-story building. All windows were gone, along with the sash—and much of the wall space had been windows. We stayed in one big room on the second floor exposed on all sides to the weather.

About 10 pm. the rains came, along

***he rains***
***ame***

ith high winds. There was no place o go to keep out of the wet. Some f the boys moved their cots around, but changes in wind direction soon had us all pretty well soaked. I made out better than ost, for I had carried along a poncho incoat, which I threw over my cot nd managed to keep fairly dry. Dawn und us a miserable crowd. The wind creased, the rain never let up.

By late morning the storm had in-eased in fury. The building shook. e rain came in horizontally—and ere was no protection. One of the rrespondents—John Carlisle of the etroit News—spotted a jeep going by ith the 32nd Division insignia on it. e ran out and stopped it—it seems wrote a book about the 32nd on uzon—and he found some of his old uddies were quartered in Jap officers uarters some distance away. He in-estigated and found they could take re of our party—in a dry building here hot food was available. We ansferred in jeeps, but of course got aked even more in the move. Lt. Col. raser, of the 1st Batt., 127th Inf., nd Div., welcomed us with a hot nch. We were assigned to various oms, and everything seemed lovely—t it wasn't to last.

The storm got worse, with reports at the peak would come at 4 p.m. did, after a few minutes of calm hich indicated the center of the ty-oon was passing by.

***ind — at***
***50 mph.***

Then the wind whipped around the pposite direction and increased to a eed I've never seen before and never ant to see again—the Air Corps said later their speed indicators went out at 150 mph., so some of the gusts must have been ore than that. Our building started disintegrate. Windows were smashed first, then parts of the walls came , and roof tiles were leaving like aves. The whole structure shuddered d shook like it was going to take off. I had been able to brace a cot against e window in our room, which kept from breaking in, one of the few ndows saved. But the roof was damged over our room, so we got a soakg anyway. Right in the midst of all e fury and commotion a GI rum-aging through a closet accidentally scharged a Jap rifle stored there. e bullet went through the ceiling, ssed right through a crowd of us tching the storm from a hall window glassless by that time—and went on t through the roof.

That morning the pilots went out to e airfield and tied our plane and veral others down to trucks in an effort to save them, but we couldn't get any report as to their condition by late afternoon. Three barracks housing Marines collapsed with only one broken leg as a casualty, for the officers had gotten most of the occupants out into caves. Jap buildings all around us simply disintegrated. By 6 p.m. the storm had spent its fury, but wires and trees and poles were down so it wasn't safe to try to get to the airport to check the planes. Power and water were off.

***"I braced my cot against the window"***

***Poor***
***"Dottie"***

The next morning broke clear and calm, and after breakfast we all went out to the strip to learn the fate of Dottie. Poor Dottie—she was spraddled out on the apron like a broken-wing gull. The landing gear had collapsed, the tail was pounded off, and one wing crumpled up. A big hole under her nose showed where she had pounded herself into a cripple against the truck. But Dottie wasn't the only casualty. In fact, there were a score of planes worse off than ours. One C-46 transport, tied to a $2\frac{1}{2}$-ton truck, had flipped over on its back with the truck right side up on its belly—I got a picture of that one, so you'll have evidence some day if you don't believe it. But Dottie was not only unflyable, she was unsalvageable, so we watched her dragged off to the boneyard and ignominiously dumped alongside several bombed-out Jap planes waiting the junkman there.

*By radiogram, Manila, P.I., Oct. 12:*

Practically the entire military personnel of Okinawa is without shelter following the typhoon of October 9 which swept the south half of the island, demolishing all tentage and most semi-permanent buildings. The wind was reported **exceeding 150 mph, and wire communications and port facilities were damaged so badly that they will be out of commission for at least a month.**

Our pilot radioed his squadron in Tokyo for a relief plane, but word came back the storm had moved north and nothing was flying. So we went back to the 127th Inf., where Col. Fraser tried to make us as comfortable as possible in a windowless building without water or power. We were given a treat Tuesday night when a showing of "This is the Army" was made against the wall of a large room, power being supplied by a small generator.

***Another***
***look at***
***Nagasaki***

Wednesday noon we got word a plane was on its way to pick us up, and we took off from Kanoya field at 2 pm., having been there since Sunday afternoon. We had to return via Omura to pick up a plane crew there whose ship was wrecked by the storm. As we landed—this time on the sod strip which had been investigated and found OK—I noticed an old friend standing on the taxiway—Col. E. E. Kirkpatrick, U. S. Engineers, who was engineering officer for Gen. Worsham on Canol and Alcan. He was waiting for transportation to Nagasaki to join Gen. Jim Newman of the atomic bomb mission. So it took me 30 seconds to get my baggage off the plane and join him, with assurance I would get to Tokyo with him the next day. We finally wangled a Jap to drive us to town in a Buick. The rest of the party was at the Beach Hotel—a European-type resort hotel six miles beyond Nagasaki. There we found fairly comfortable quarters and were served an excellent Japanese dinner with plenty of Jap beer and sake, so the evening was a success. Incidentally though the accommodations were the best I have found in Japan—I still don't like it.

The next morning Kirkpatrick and Newman and I made another tour of the bombed area and I got a much better chance to examine the damage closely. We arrived back at Omura airport at 1:30 in a GI truck, and took off for Tokyo in a big C-54—some difference from the heavily-loaded C-47 I had been traveling in. We landed at an airport nearer Tokyo than Atsugi, and were back at the hotel Dai-Iti by 5:30 in time for a clean-up and change of clothes before dinner (Thursday).

A big sign at the desk greeted us upon return to the hotel:

"On account Confusion Non-Acceptance of Laundry Will Be For Several Days."

So here goes the rest of the evening on laundry detail. It isn't the first time I have washed out my sox and shirts.

And that, me hearties, is why the ENR report of the atomic bomb damage was delayed a week.

*RICH*

## Calendar of Meetings

### NATIONAL

**Associated General Contractors of America, Inc.,** fall meeting, Drake Hotel, Chicago, Ill., Oct. 30-31.

**American Institute of Steel Contruction,** Annual Meeting, French Lick Springs Hotel, French Lick, Indiana, Oct. 29 to Nov. 1.

**American Public Works Assn.,** Fifty-first annual congress, Sherman Hotel, Chicago, Ill., Nov. 4, 5 and 6.

**Society for Experimental Stress Analysis,** annual meeting, Hotel Astor, New York, N. Y., Nov. 26-28.

### REGIONAL

**New York State Society of Professional Engineers, Inc.,** autumn meeting, Arlington Hotel, Binghamton, N. Y., Oct. 26-27.

**North Dakota Water and Sewage Works Conference,** Annual conference, Gardner Hotel, Fargo, Nov. 8 and 9.

**Ohio Conference on Sewage Treatment,** Fort Hayes Hotel, Columbus, Oct. 31 and Nov. 1.

**Illinois Sewage Treatment Plant Operators,** annual convention, Leland Hotel, Springfield, Nov. 8-9.

**Carolinas Branch, Associated General Contractors of America, Inc.,** annual convention, Southern Pines, N. C., Nov. 19-20.

**Southeastern Association of State Highway Officials,** Atlanta Biltmore Hotel, Atlanta, Ga., Dec. 3-4.

**Black Top Roads Association,** Abraham Lincoln Hotel, Springfield, Ill., Dec. 5.

**Illinois Water Plant Operators,** Leland Hotel, Springfield, Ill., Dec. 5-6.

**South Dakota Water and Sewage Works Conference,** Lawlor Hotel, Mitchell, S. D., Dec. 6-7.

**American Water Works Assn.:**

**Missouri Valley Section,** 30th annual meeting, Hotel President, Kansas City, Mo., Oct. 29-30.

**Illinois Section,** La Salle Hotel, Chicago, Ill., Oct. 30-31.

**North Carolina Section,** Hotel Charlotte, Charlotte, N. C., Nov. 5-7.

**Virginia Section,** Hotel Roanoke, Roanoke, Va., Nov. 8-9.

**New Jersey Section,** Hotel Madison, Atlantic City, N. J., Nov. 8-10.

**Wisconsin Section,** Pfister Hotel, Milwaukee, Wis., Nov. 13-15.

**Florida Section,** MacFadden Deauville Hotel, Miami Beach, Fla., Nov. 15-17.

**Four States Section,** Lord Baltimore Hotel, Baltimore, Md., Dec. 13-15.

## Enlarge Denver office of Bureau of Reclamation

To accommodate a Region 7 Bureau of Reclamation office staff that will be increased by 1000 engineers and skilled workers to handle work that has piled up during the war, a lease has been signed for four floors of the Golden Eagle Building in Denver, Colo. The present Denver offices of the bureau, where 750 are employed, will also be maintained.

The large engineering and drafting job ahead will include work on bureau projects closed down during the war because of lack of materials and manpower; projects deferred to the postwar period and a postwar development program.

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## Experiment station head appointed at Vicksburg

Col. Lindner

Lt. Col. C. P. Lindner, who has been serving as consultant to the president of the Mississippi River Commission, has been appointed director of the U. S. Waterways Experiment Station, Vicksburg, Miss. He succeeds Gerard H. Matthes, who resigned Sept. 30. (*ENR* Sept. 27 vol. p. 406)

A native of Wisconsin, Col. Lindner has been associated with the Mississippi River Commission for the last 13 years, first as a civilian and later as an officer, specializing in hydraulics. He is a graduate of the University of Wisconsin with a master's degree in civil engineering, and at one time taught in the engineering school there.

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## Appoint C. B. Shain to head highway bureau

Clarence B. Shain has been appointed Washington state highway director to fill a vacancy left by the recent death of Clarence Hickey. Governor Mons C. Wallgren said that James A. Davis, serving as acting director, will return to his former post of assistant director.

Mr. Shain's most recent position was director of hydraulics in the State's Department of Conservation and Development. He was previously Thurston County engineer at Olympia and city engineer at Centralia.

## NEWS IN BRIEF

*In telegraphic form, here are further news developments on the engineering and construction front during the week*

**Highways**—To enable construction of a new Marin County approach to the Golden Gate Bridge, Governor Warren of California recently signed a bill to lend $5,000,000 to the Golden Gate Bridge District. . . . Dallas, Tex., announced its determination to pave every alley in the city, at a cost of $2 per alley foot. . . . Illinois passed a new state law appropriating $15.000,000 from the general revenue fund for farm-to-highway road improvements. . . . The Florida State Road Department said it had millions of dollars on hand for new work, was seeking additional engineers and draftsmen to put its program into operation. . . . New England states announced they would spend $26,000,000 for repair and rehabilitation of war-weary roads. . . . Nearly 14,000 miles of dirt road in Ohio will be surfaced or otherwise prepared for all weather use. . . . Cuyahoga County, Ohio, began condemnation proceedings in the case of two industrial plants blocking the proposed Lakeland Freeway.

**Mexico**—About $29,000,000, one third of the national budget, is now being spent on irrigation works. . . . In an effort to stop black market in cement, all future distribution of the product in Mexico will be under direction of the Price Control Commission. . . . An investment of $8,250,000 yearly is planned to build low-cost housing for poorer families in Mexico City. . . . Plans are under study for construction of a $40,000,000 subway in Mexico City. . . . Marte Gomez, Secretary of Agriculture, announces plans to spend $13,000,000 on El Azucar Dam, irrigation project in the State of Tamaulipas.

**Miscellany**—Portland, Me., Port Authority announces plan to expand pier facilities to double present capacity, at cost of about $500,000. . . . Salem, Ore. property owners revived a million-dollar prewar plan for modernization of four blocks of Commercial Street, including construction of a new hotel and medical arts building. . . . U.S.E.D. office at Providence, R. I., said it had a major beach erosion survey under way in the Watch Hill, R. I., area. . . . Worcester, Mass., planned construction of a new dam to supplement its water supply system—a 1,500-ft. earth dam with a concrete core.

# House approves $700 million fund for 10-yr. airport building program

### Money to be used on a 50-50 matching basis for $1.4 billions of construction—Grants made direct to local sponsoring agencies

A total of $650,000,000 of federal aid for airport construction within the United States during the next ten years is provided in a bill (H.R. 3615) passed last week by the House. The measure also supplies an immediate appropriation of $3,000,000 for planning work and $50,000,000 of assistance during the 10-yr. period for airport construction in U. S. territories and possessions.

The first year's aid would become available with the start of the fiscal year 1947, which begins next July 1. The local sponsoring agencies would be required to match the funds on a 50-50 basis. During any one year not more than $100,000,000 of the federal money would be spent on projects within the U. S. and not more than $10,000,000 for work outside the country.

Of the money to be available each year 75 percent would be apportioned to the various states on the basis of one-half in proportion of the area of a given state to the total of the country, and one-half on the basis of population. All aid available to the states and not apportioned in this manner would go into a discretionary fund. The money would then be used to provide the United States' share of projects as the Administrator of the Civil Aeronautics Administration deems most appropriate. In either manner of using the federal aid the grants could be made directly to the local sponsoring agencies.

### Bill differs from Senate measure

The bill passed by the House differs appreciably from the measure (S. 2) passed by the Senate Sept. 12 (*ENR* Sept. 20, vol. p. 356). The latter provides $375,000,000 of federal aid for a -yr. program if the money is matched on a 50-50 basis. All the assistance voted by the Senate would need to be allocated through the various state airport agencies.

The Senate bill also requires that at least 65 percent of the appropriation for a given year be used for the construction of smaller airfields or those in Classes 1, 2 and 3 as defined by the CAA. This aid would be apportioned to the several airport agencies on the basis of one-half according to the population of a given state in proportion to the nation's total and one-half on the basis of area. The remaining 35 percent would be distributed through the state agencies for the construction of larger airfields or those designated Classes 4 and 5 by the CAA.

Early action to iron out the difference between the House and Senate bills is expected.

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## A 1,000-mi. oil pipeline from the Persian Gulf

A 1000-mi. pipeline, costing between $70,000,000 and a $100,000,000, will be built to bring oil from the Persian Gulf to the Mediterranean, according to H. D. Collier, president of Standard Oil Co. of California.

The 26-in. line will carry 200,000 bbl. per day from Arabian reserve fields by a deal which will net King Ibn Saud's government 21 cents for each barrel.

No government money is involved in the construction of the pipeline, Mr. Collier said, as financing is being done by Standard and the Texas Co., joint holders of the oil leases, through their subsidiary Arabian-American Oil Co.

## Ohio Water Board has powers expanded

The name of the Ohio Water Supply Board has been changed to the Ohio Water Resources Board and its authority and activities have been expanded.

Regulatory activities assigned to the board are as follows: Requiring the filing of well logs; issuance of regulations for drilling and abandonment of wells to prevent contamination of underground waters, and requiring the filing of plans for dams to be built in the state, except municipal supply.

An expanded program of investigation calls for: Installation and operation of water stage recorders on about 100 drilled wells and obtaining weekly tape measurements on about 100 additional drilled wells; initiating stream gaging on drainage areas less than 20 sq. mi. to supplement the present program; analyses of and publication of flood frequencies in Ohio; preparation of mass curves and tables for principal streams of the state; compilation of all records of stream flow; collection of data on chemical quality and temperature of principal streams; test drilling and geophysical surveys of potential ground-water reservoirs; and preparation of comprehensive reports on the water resources of Butler, Hamilton, Stark, and Montgomery counties.

## Floodlamps aid Anderson Ranch Dam raising work

*In a race against time, crews are working 'round the clock to bring Anderson Ranch Dam to a height sufficient to impound 45,000 ac. ft. of water next spring for the Boise, Idaho, reclamation project.*

*Top of the dam (right center) is now 300 feet above bedrock, and workers are rushing to raise this an additional 156 ft. to make the structure the highest earthfill dam in the world. Foreground shows upstream rip-rap slope, with the gate structure for outlet works at left.*

*Headlights of moving equipment make the wavy twin lines on the photograph.*

*Morrison-Shea-Twaits-Winston Co. are contractors.*

## Senate group votes against MVA approval

**Irrigation and Reclamation group reports unfavorably on Murray Bill—fears "arbitrary" agency**

Another major setback to the creation of a Missouri Valley Authority occurred last week when the Senate Committee on Irrigation and Reclamation declared forcibly against the Murray Bill (S. 555), which would create an MVA along the lines of the Tennessee Valley Authority.

This group is the second Senate committee to vote against the bill, the Commerce Committee having reported unfavorably on the measure early in May (*ENR* May 10, vol. p. 677).

Because of these two important decisions against the proposed legislation, and the fact that the President has asked Congress for the funds for the Army Engineers and the Bureau of Reclamation to start construction of four new dams in the valley (see p. 12 in this issue), passage of the bill seems highly improbable. However, before the Senate as a whole can vote on the proposal, the Agriculture Committee will be permitted 60 days to hold hearings, which may delay the vote for several weeks.

In reporting unfavorably on the bill the committee said:

"The creation of an MVA would amount to the wielding of economic and political powers resulting in nothing short of autocracy. It would mean the substitution of arbitrary power for democratic processes. It would mean the creation of a superstate—neither federal nor state, and not contemplated by our constitution. It would subject the social, cultural, and economic welfare of the Missouri Basin to the dictates and whims of a three-man board, not responsible to the people and largely irresponsible to the Congress itself. It would constitute a virtual abdication by the Congress."

The committee also declared creation of an MVA would be "an excursion into an uncharted field of vast expenditures of public funds and of experimentation under a board unemcumbered by the restraints that a democracy should erect against agencies of government."

The comprehensive plan already approved by Congress for the Missouri Basin with the intent that the Bureau of Reclamation and the U. S. Army Engineers should do $400,000,000 of work in the valley (*ENR* Dec. 14, 1944, vol. p. 733 and vol. p. 757) was also cited by the committee. Execution of this program by the two agencies in cooperation with the other federal organizations, was declared a much better way to develop the basin.

## Arizona approves study of water resources

Governor Sidney P. Osborn of Arizona recently signed a bill appropriating $46,000 to finance a joint federal-state survey of the state's underground water resources.

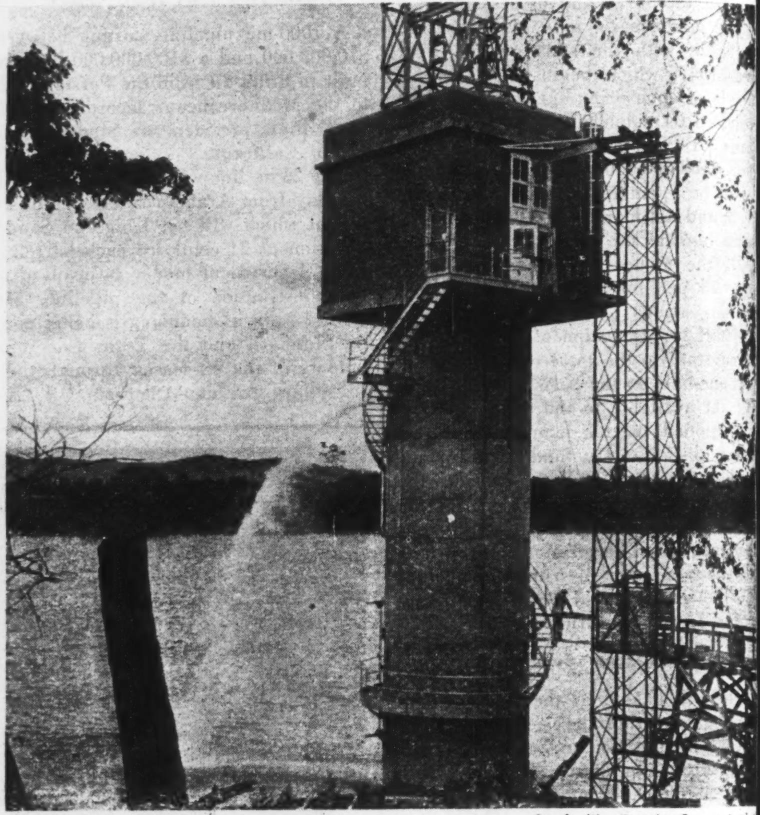
In addition to providing funds for the survey, the measure requires all persons operating wells to report on their operations; and all persons desiring to drill wells to file notice of intention with the state land commissioner.

The bill was passed by the state legislature following reports that ground waters were seriously depleted.

## Ogden, Utah, reservoir drained for inspection

To allow Ogden, Utah, engineers to inspect 47 artesian wells located at the bottom of Pine View reservoir, lake water was drained at the rate of 600 acre-ft. a day in October.

The wells furnish a part of Ogden's water supply and the city has asked $5,000 damages from the Bureau of Reclamation, which built Pine View Dam, claiming coverings on the wells and other construction were faulty when first placed. Ogden can demand that the reservoir be drained each year for inspection and repair of wells if necessary.



*Louisville Courier-Journal photo*

## Horizontal radial well has vertical features, too

*Latest installation of the radial type well for underground water collection has been placed in operation at the National Carbide Corp. plant at Louisville, Ky. This 4.3 mgd. capacity well, eleventh of its type in the Louisville area, was installed by the Ranney Water Collector Corp. of New York. Altogether in the United States there are about 50 similar wells in operation, some 45 of which are serving industrial establishments.*

*Standing 72 ft. above normal level of the Ohio River, the pumphouse of the National Carbide well is expected to be beyond the reach of the highest flood levels. The 16-ft. dia. concrete shaft on which the pumphouse rests extends 26 ft. through the water at the river's edge and penetrates another 24 ft. below the river bed.*

*At the base of the shaft perforated screen pipes (of 8 in. dia.) have been projected horizontally through valved portholes into the water-bearing gravel and sand. There are nine pipes arranged radially around the shaft like spokes in a wheel; these collector pipes, which project for varying distances ranging from 50 to 240 ft., discharge into the central shaft.*

*For details of a typical radial well installation see EN-R Oct. 22, 1936 vol. p. 576 and Jan. 6, 1938, vol. p. 25.*

## Approve locations for 19 veterans' hospitals

**New buildings, with 15 expansion programs also planned, to cost $100-120 million**

President Harry S. Truman last week proved locations for 19 new Veterans dministration hospitals, and additions 15 existing hospitals and four exist- g domiciliary homes.

The hospitals and additions will pro- le altogether 15,276 new beds. All uctures will be of new fireproof con- uction of permanent type. Total cost the program is estimated at between 00,000,000 and $120,000,000.

These beds are a part of a 29,100- l program approved by the President Aug. 4 of this year—when approval s given to the program without com- tment as to locations. Funds for new hospitals and additions will be uested for the current fiscal year 946). The remainder of the program l be requested for 1947.

New hospitals will be built in or near following cities: Albany, N. Y.; ffalo, N. Y.; Baltimore, Md.; Clarks- g, W. Va.; Cincinnati, Ohio; De- ur, Ill.; Duluth, Minn.; El Paso, xas; Gainesville, Fla.; Iowa City, va; Louisville, Ky.; Omaha, Neb.; lahoma City, Okla.; New Haven. nn.; Phoenix, Ariz., and Washington. C. The hospital at Baltimore will se Tuberculosis patients; those at inesville, El Paso and Oklahoma y will be for neuro-psychiatric pa- ts; and all others will be for gen- l medical and surgical patients. The ts range from $1,400,000 for the enix hospital to $7,000,000 for that Albany.

Additions to existing and authorized pitals include a $9,600,000 job at anon, Pa., and $2,400,000 of work Bedford, Mass.

### Cost $7,000 per bed

Estimates are based on a cost of ut $7,000 per bed for general medi- and surgical hospitals, and $6,000 beds in the tuberculosis and neuro- chiatric institutions.

Additions to domiciliary facilities will made at Bath, N. Y.; Mountain me, Tenn.; Bay Pines, Fla., and Day- , Ohio.

Gen. Omar N. Bradley, Administrator Veterans' Affairs, said that it is erstood that the President's author- permits the Veterans Administration make tentative site selections, but the administration will submit to Federal Board of Hospitalization re- sts for authorization to acquire the cific sites for the 19 new projects merated.

## A.S.C.E. to resume quarterly meetings

Regular peacetime quarterly meetings of the American Society of Civil Engineers will be resumed next year, starting with the April session which is tentatively scheduled to be held in Pittsburgh, Pa., according to William N. Carey, secretary. Tentative arrangements also are being made to hold the Summer meeting in Spokane, Wash. next July, and the Fall meeting in Kansas City, Mo., during October.

At a meeting of the Society's board of directors last week in Chicago, it was decided to hold the annual meeting in New York some time next January. Due to congested hotel and travel accommodations, however, activities at this session will be somewhat curtailed, comparable to those of the January meetings held during the war.

Collective bargaining for civil engineers came in for its usual study at last week's meeting. The board of direction reaffirmed its earlier policy (*ENR*, Oct. 19, 1944, vol. p. 461) to assist local groups of engineers, at their request, in taking measures to protect them from being forced into heterogeneous labor bargaining groups, not of their choosing and against their will.

Mr. Carey also announced that Maj. Walter E. Jessup of the Corps of Engineers, U. S. Army, during the war, has returned to his former position as assistant to the secretary. He will serve as the society's West Coast representative. The board also authorized the employment of a full-time assistant to the secretary whose principal duties will be to direct the society's public relations. No appointment to this office has yet been made, said Mr. Carey.

On Monday evening, Oct. 15, the Illinois Section of A.S.C.E. held a reception for the national officers and board members of the society attending the meeting.

The board of directors adopted an amendment to the society's by-laws that will materially simplify the transfer of associate members to members grade.

## JOBS OF THE WEEK

**LIBRARY, Princeton, N. J.**

Turner Construction Co., New York, N. Y., has been awarded a contract to build the Harry J. Firestone Library by Princeton University, to cost about $3,500,000. Robert B. O'Connor and W. H. Kilham, Jr., New York, N. Y., are the architects.

**CANDY FACTORY, New York, N. Y.**

Irons & Reynolds, Inc., New York, N. Y. has been awarded contract for candy factory to cost about $1,000,000 by Fanny Farmer Candy Shops, Rochester, N. Y. Kaelber & Waasdorp, Rochester, are the architects.

**PLANT EXPANSION, Dayton, Ohio**

Ferro Concrete Construction Co., Cincinnati, has been awarded a contract for 1 and 2-story, 640 × 360 ft. plant addition for Chrysler Corp., Airtemp Division, Dayton, to cost $1,500,000. Albert Kahn Associated Architects & Engineers, Inc. are the engineers and architects.

**NURSES HOME, Cleveland, Ohio**

Gillmore-Carmichael-Olson Co., Cleveland, has been awarded a contract to design and construct 5 and 6-story nurses' home by St. Luke's Hospital, Cleveland, at an estimated cost of $1,000,000.

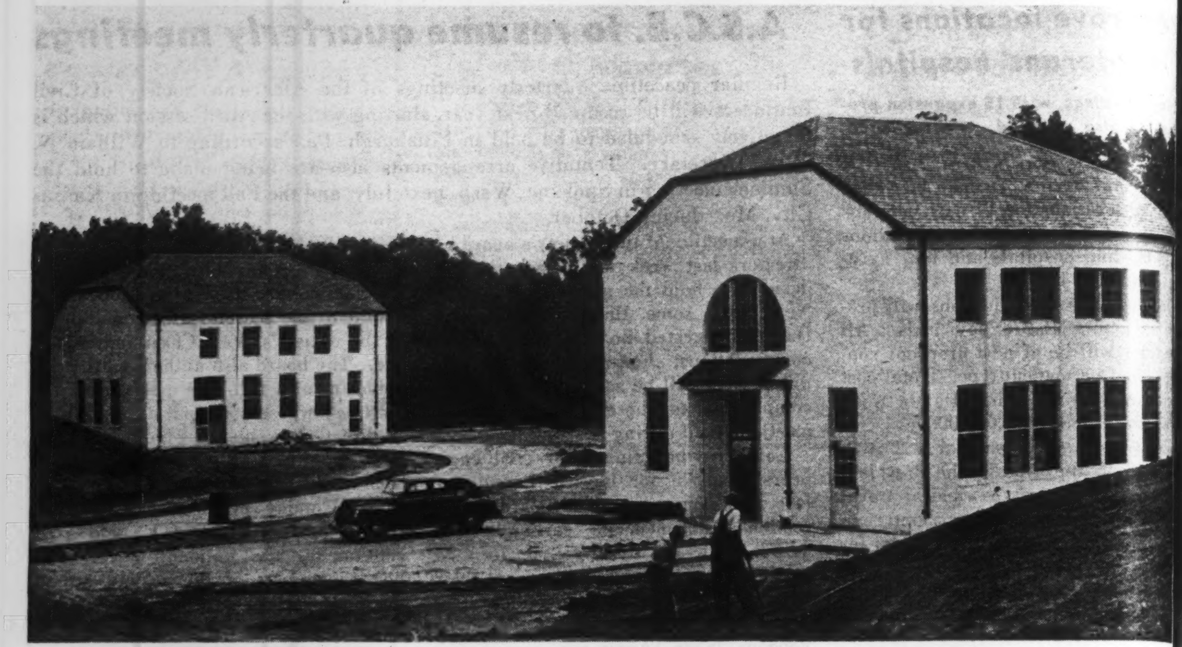
**ADMINISTRATION and LABORATORY BUILDING, Whiteoak, Md.**

Charles H. Tompkins Co., Washington, D. C., has been awarded a contract for a laboratory and administration building, barracks and magnetic buildings, road and bridge construction at Naval Ordnance Laboratory, by Bureau of Yard & Docks, Navy Department, Arlington, Va., $4,848,000. Eggers & Higgins, New York, N. Y. and Taylor & Fisher, Baltimore, Md., are the architects.

**ASSEMBLY PLANT, South Gate, Calif.**

General Motors Corp., (Southern California Division) awarded a contract for an assembly plant to Swinerton & Walberg Co., San Francisco. The estimated cost is $1,264,000. Argonaut Realty Div., General Motors Corp., Detroit, is the architect.

Note—Additional bidding and contract news on many projects large and small, including the above items, appear in the Construction News section beginning on page 18.



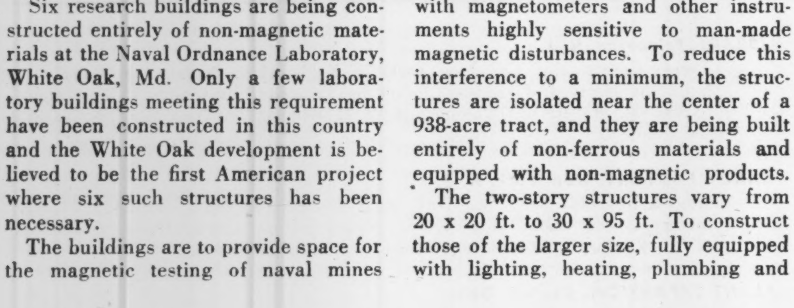
***Six buildings of this type were built at White Oak, Md., for the magnetic testing of naval mines.***

# Buildings With Non-Magnetic Properties

Six research buildings are being constructed entirely of non-magnetic materials at the Naval Ordnance Laboratory, White Oak, Md. Only a few laboratory buildings meeting this requirement have been constructed in this country and the White Oak development is believed to be the first American project where six such structures has been necessary.

The buildings are to provide space for the magnetic testing of naval mines with magnetometers and other instruments highly sensitive to man-made magnetic disturbances. To reduce this interference to a minimum, the structures are isolated near the center of a 938-acre tract, and they are being built entirely of non-ferrous materials and equipped with non-magnetic products.

The two-story structures vary from 20 x 20 ft. to 30 x 95 ft. To construct those of the larger size, fully equipped with lighting, heating, plumbing and testing facilities without using magnet metals of any type, resulted in sever unorthodox substitutions. For exampl non-magnetic aggregates and sand we used in the concrete foundations, aft having been tested with highly sensiti magnetometers by the Magnetic Lab oratories of the Naval Ordnance Lab ratory at the Washington, D. C., Nav Yard. Brass reinforcing rods instea of steel were used at a few point since reinforcing of the concrete cou not be eliminated entirely.



***In the roof and upper floor construction wide use was made of copper nails and bronze bolts and gusset plates. The roof is covered with slate shingles.***

### Walls of hollow concrete block

In constructing the load-bearing wall normal red clay brick could not be us since it contains iron oxide. Holl concrete block was considered sat factory, but to assure that this materi was free of all magnetic properties, sa ples of the block were tested in the sa manner as the aggregate and sand. avoid the use of metal sash, wood windows installed with either brass bronze hardware were utilized, t counterweights consisting of le weights suspended from bronze chai

Construction of the roof and upp floor of the buildings was distinguish by the use of copper nails and bro bolts and gusset plates. At some poi the finished floor is 1¾-in. thick tong and groove oak planking. To put t material down with copper nails was

***Since red clay brick (which normally would have been used) contains iron xide, hollow concrete block with non-magnetic properties was substituted in e construction of all load-bearing walls. Window frames and sash of wood were installed with brass or bronze ardware; lead counterweights are suspended from bronze chains.***

asy job. However, by taking special are it was possible to use this method f construction.

For the larger structures, roof trusses 50-ft. span were employed and in eir assembly numerous ¾-in. dia. ronze bolts were required, the gusset ates also being made of bronze. The usses rest on 12 x ¾ x 16-in. brass aring plates. The finished roof nsists of slate shingles and the eave tters and downspouts are all of copper.

When installing the electric lights, plastic and bronze fixtures were used. The switch boxes were made of aluminum, bronze or porcelain, depending on the size. All of the electric cables were nstalled in fibre ducts.

### Non-magnetic plumbing equipment

To avoid the use of magnetic materials in installing the plumbing, the ains were built of asbestos-cement pe, the vent pipes were made of copper and the fixtures of brass. All the ating and water piping is copper, as e the radiators and enclosures.

The $15,000,000 project, which is be- carried to completion for peacetime e, is being built by the Bureau of Yards and Docks for the Bureau of Ordnance. Capt. Ira P. Griffen is in harge for the former bureau, and pt. W. G. Schindler is in charge for e Bureau of Ordnance. R. B. Dittmar, chairman of the laboratory commit-, coordinated the design and con- uction.

Harwood-Nebel Construction Co., shington, D. C., was the general tractor. Eggers and Higgins, New rk, associated with Taylor & Fisher, ltimore, Md., were the architects.

***gregates and sand for the concrete ndations were tested to assure free- n from all magnetic properties. Brass nforcing rods were used instead of l.***

# American Welding Society greets new officers, makes annual medal awards

## W. F. Hess is new president of group, other officers named—L. C. Bibber gets Lincoln Medal for paper

Members of the American Welding Society held their 26th annual meeting in New York City last week, to seat the new president and other officers and to witness presentation of the society's annual award.

Wendell F. Hess, professor of metallurgical engineering and head of the welding laboratory at Rensselaer Polytechnic Institute, Troy, N. Y., was introduced as president for the year 1945-46. He is a holder of the Lincoln Gold Medal and Certificate awarded by the society in 1944 and holds the University award of the Resistance Welder Manufacturers Association.

Seated as first vice president was Harold O. Hill, assistant chief engineer, fabricated steel construction, for the Bethlehem Steel Co., Bethlehem, Pa. George N. Sieger, president and general manager of the S-M-S Corporation of Detroit, Mich. is second vice president, and the following directors were introduced: C. M. Underwood, Minneapolis, Minn.; A. B. Kinzel, New York, N. Y.; Charles H. Jennings, East Pittsburgh, Pa.; R. D. Thomas, Philadelphia, Pa.

The society voted honorary membership to H. H. Deppeler, chief engineer of the Metal & Thermit Corp., New York; David Schenck Jacobus, formerly professor of experimental mechanics and engineering physics at Stevens Institute of Technology; and H. C. Boardman, research engineer for the Chicago Bridge & Iron Co. of Chicago, Ill.

### Gets Lincoln award

Leon C. Bibber, welding engineer for the Carnegie-Illinois Steel Corp., received the 1945 award of the Lincoln Gold Medal and Certificate. The award was made for Mr. Bibber's paper "Tensile Properties of Heavy Longitudinally Welded Plate Specimens Simulating Deck and Shell Joints," which appeared in the April 1945 issue of the society's *Welding Journal.*

The only formal paper presented at the one-day meeting was the annual Adams lecture, presented by Dr. Samuel L. Hoyt, technical adviser, Battelle Memorial Institute, Columbus, Ohio.

Dr. Hoyt's paper dealt with the selection of steel for welding and the desirability of studying design, welding methods and materials in such applications as building ships, bridges, railroad cars and other outside structures. The lecture emphasized the greatly increased rigidity of the welded structure as compared with older riveted construction, and pointed out the significance of notch toughness and the cohesive strength of steel.

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# Trained road help short in North Carolina

The State of North Carolina, seeking to put a considerable road program into operation, last week said it was facing intense competition from private industry for the needed technical help.

W. Vance Baise, chief engineer for the State Highway Department, said he is having "little success" in obtaining qualified engineers.

"We need 20 to 25 men right now in our location department," he stated. "We ought to have at least 50 additional draftsmen and designers."

# Gen. C. P. Gross to head New York transit board

Major General Charles P. Gross, chief of the Army Transportation Corps, will become chairman of the New York City Board of Transportation on his release from active army service.

General Gross will succeed John H. Delaney, chairman of the board since its creation in 1924, who said he would retire after Nov. 15.

An engineer officer, General Gross was graduated from West Point in 1914 with a commission in the Corps of Engineers, and since has served in the regular army without interruption. During the first World War, he served as battalion commander, 4th and 318th Engineers, reaching the rank of colonel (temporary). Returning to the United States, he attended the Command and General Staff school, and was district engineer successively at Los Angeles, Cal., Rock Island, Ill., and in 1939, as lieutenant-colonel, was made chief of transportation, supply division, attached to the General Staff. In 1941, he was sent to Russia as a member of a special war supply mission.

In March, 1942, he became a brigadier general and Chief of Transportation in the Service of Supply, becoming major general in August of that year.

# President asks millions for building

(*Continued from p.* 1)

Money wanted for the special reclamation fund of the bureau totals $13,287,000 and is mostly for construction. This fund is earmarked as follows: Investigations and expenses, $4,000,000; Boise project, $2,000,000; power division of the bureau, $1,124,000; Riverton project in Wyoming, $1,000,000; Shoshone project, $1,000,000; Klamath project, $1,000,000; Deschutes project, $1,000,000; Rio Grande, $750,000; Minidoka project in Idaho, $720,000; Kendrick project in Wyoming, $500,000; Owyhee project in Oregon, $190,000; and Vale project in Oregon, $3,000.

### Large sum for Missouri Basin

Also included in the money requested for the bureau is $11,918,000 for work in the Missouri River basin. Of this amount $6,325,000 is wanted for the initial construction of Kortes, Angostura and Boysen dams and for construction of a power transmission line from Fort Peck Dam to the Garrison Dam site. The line would furnish power while the Corps of Engineers builds the dam and after the latter is completed the line could be used to distribute power generated at the new dam.

The remainder of the request for the Bureau includes $3,827,000 for continuation of the All-American Canal construction, $2,000,000 for the Fort Peck project, and $1,000,000 for investigations of projects for utilization of Colorado River water in the four states of the upper basin.

### Other money asked

An additional appropriation of $50,000,000 for the Bureau of Community Facilities of the FWA to aid local planning groups has been recommended by the President. He has requested that the bureau be permitted to enter into contract obligations to the extent of an additional $57,500,000. Some months ago the bureau was provided with $17,500,000 for planning aid to local groups. This money, when combined with the aid now requested would result in a total fund of $125,000,000 or the amount first requested for the bureau by the late President Roosevelt. Of the $17,500,000 already on hand, a sum of $6,127,393 had been allocated as of Sept. 30, for planning construction estimated to cost $246,000,000. Other requests totalling $18,293,432 were being considered then

# Re-examination of engineer schools planned by development council

## Engineers' Council for Professional Development will begin restudy of curricula as soon as schools approach peacetime basis

Reexamination of the curricula of engineering schools accredited by the Engineers' Council for Professional Development is to be undertaken as soon as the schools have recovered from the effect of their wartime activity. This plan was announced by the Committee on Engineering Schools at the annual meeting of the E.C.P.D. held in New York, Oct. 19-20. Meanwhile, the examination of the curricula of schools that have applied to E.C.P.D. for accrediting is to be continued.

In its reexamination work, the committee stated that it will give special attention to the engineering schools whose students consistently fail or make low passing marks in the New York State license examinations.

Accrediting of technical institutes, authorized last year (*ENR* Oct. 26, 1944, vol. p. 525), is to get under way soon.

The committee called attention to the apparent lack of knowledge on the part of educational counselors at military camps and high schools concerning the serious shortage of graduate engineers. It suggested that the Committee on Student Selection and Guidance could help correct that situation.

### Lack of engineers

On this point the latter committee stated that the demand for engineers appears to have reached a maximum while the supply is approaching a minimum. The committee has written to all local engineering societies asking them to assist in interesting returning veterans in engineering work or in the study of engineering.

### Civil service requirements

Fear that civil service requirements for engineering positions might be lowered under the Veterans Preference Act of 1944 was expressed by the Committee on Engineering Schools and by the Committee on Professional Recognition. As a result, a resolution was adopted offering to the U. S. Civil Service Commission the assistance of E.C.P.D. through the appointment of an advisory committee. This committee would advise the commission as to minimum standards that should be maintained.

### Uniform membership grades

A recommendation that the major engineering societies set up uniform membership requirements and uniform nomenclature was made by the Committee on Professional Recognition. It proposed that these be limited to the following:

*Fellow*—An engineer of distinction.

*Member*—An engineer who has achieved education and experience equal to the "minimum definition" proposed by E.C.P.D. in 1933.

*Junior Member*—Graduate of an approved school, or four or more years of satisfactory experience.

*Student Member*—A student pursuing the study of engineering in an accredited curriculum.

The committee noted that proposals of this kind have been before E.C.P.D. since it was organized in 1933, with little sign of any progress being made. At the meeting it was reported that the American Society of Civil Engineers now has a committee studying the subject.

### Definition of engineering

Without recommendations for approval, the Committee on Professional Recognition presented to the council a definition of the practice of engineering written at a conference of engineering society representatives held in New York late in August. It also reported that a new definition had been written into the new Illinois license law.

During the coming year the committee plans to study the question of an overall engineering society with the objective of making specific recommendations to E.C.P.D.

### Officers reelected

Everett S. Lee, engineer of the general engineering laboratory, General Electric Co., Schenectady, N. Y., was reelected president, and James W. Parker was reelected vice president. William N. Carey, secretary of the American Society of Civil Engineers, was elected secretary to succeed R. L. Sackett under the plan by which the secretaryship is rotated among the engineering societies.

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# New plan commission chief for Philadelphia

D. Robert Yarnall, civil engineer and manufacturer, has been named vice president of the Philadelphia City Planning Commission.

He succeeds the late John H. Neeson, who was director of the Philadelphia Department of Public Works. The commission has already listed almost $400,000,000 worth of projects for the postwar construction program.

Mr. Yarnall has been a member of the City Planning Commission since its creation in December, 1942.

# Sell prefabricated homes to France

Sale to France of 8,111 temporary dwelling units originally intended for lend-lease shipment to Great Britain and not suitable for use in the United States has been announced by the Federal Public Housing Authority. The units are to be used in France to relieve housing emergencies in bomb-damaged cities along the French seacoast.

The transaction was concluded by the French Purchasing Mission, which agreed to pay $6,945,000 for the 8,111 units. The transaction completes liquidation of the special program under which FPHA acted as agent of the Foreign Economic Administration in procurement of the dwellings.

The dwelling units are packaged dwellings completed for the original British order which had not yet been loaded on ships when Lend-lease was terminated.

Approximately 10,000 of an original order of 27,000 had already been shipped to Britain. Designed by FPHA, the houses were severely criticized by American prefabricators (*ENR* Sept. 20, vol. p. 355) who characterized them as a "poor demonstration" of American practice. Before concluding the French transaction, Philip M. Klutznick, FPHA commissioner, said his organization had explored possibilities of domestic sale, but found them not suitable in their existing form for use here.

"These dwellings," Mr. Klutznick said, "while suitable for the conditions under which they were to be used in Great Britain and the similar use to which they will be put by the French, could not be made to serve as housing in this country without radical alterations that would be far beyond the value of the house when completed.

"As a consequence, the government is able to recover considerably more from a market abroad than from redesigning and rebuilding the dwellings for domestic use here."

# MEN AND JOBS

**Col. Malcolm Elliott,** division engineer, has left the Upper Mississippi Valley Division, U. S. E. D., and will be retired from the Army at the end of the year. Col. Elliott during the last ten years has been located in St. Louis, Mo. Made division engineer in 1938, he completed the locks and dams on the Mississippi River for the 9-ft. channel from St. Louis to Minneapolis-St. Paul, Minn. When the war started he was placed in charge of and has supervised the construction program in his division, embracing housing, airfields, factory facilities, etc., amounting to $400,000,000. For this work he received the Legion of Merit award.

About Jan. 1, 1946, Col. Elliott plans to open a consulting office in St. Louis, specializing in river and harbor work, river transportation and flood control.

**Brig. Gen. Gordon Russell Young,** of Philadelphia, has been appointed Engineer Commissioner for the District of Columbia (*ENR* Sept. 13, vol. p. 336). General Young has been on temporary duty in the Pacific. He succeeds **Brig. Gen. C. W. Kutz,** retired.

**Capt. Robert Greene,** Corps of Engineers, Jamaica, N. Y., has been assigned to the 801st AAF Specialized Depot, Buffalo, N. Y., as post engineer in charge of all the installations in the Buffalo district. He was previously assigned to the Syracuse Army Air Base, and as construction officer at Atlantic City, N. J. He received his degree in civil engineering from New York University and his master's degree from Brooklyn Polytechnic Institute. Before entry into the service, Capt. Greene was a structural designing engineer for the City of New York and was associated with the construction of the Triborough Bridge, East River Drive bridges and express highways in Queens.

**Col. Walter L. Medding,** former executive officer for the Memphis, Tenn., district, U. S. Engineers, has been awarded the Legion of Merit for outstanding performance of duty in Italy. As chief engineer for the Rome Area Allied Command, Col. Medding had charge of public utilities in Rome after the withdrawal of German forces.

**Robert H. West** has been appointed city engineer of Marshfield, Wis. Previously he was with the Victory Machinery Movers, Inc., Chicago and earlier with the Chicago Bridge & Iron Co., as yard engineer at the U. S. Navy Yards, Seneca, Ill.

**Col. Marcel Garsaud,** Louisiana engineer and port development expert, has been appointed director of the Greater Miami, Fla., Port Authority. Col. Garsaud has for 40 years worked as a consulting engineer on municipal works, flood control, development of shore projects and beach and airfield development.

**Joseph L. Quinn,** Indianapolis, Ind., has resigned as sanitary engineer of the state board of health to accept private employment. A graduate of Purdue university, Quinn had been with the board since 1939. He won the American Water Works Association's Fuller award in 1941.

**Vincent J. Newman,** former structural engineer for the Gasoline Plant Construction Corp. of Houston, Tex., and also project engineer for the Bata Shoe Co. of Czechoslovakia for eight years on works in Holland, Belgium and France, has opened an engineering and architectural office at Houston.

**David C. Tennant** has retired as chief engineer of the Ontario division of the Dominion Bridge Co., in Toronto, where he has been for ten years following many years at the head office in Lachine, Que. He is a graduate in civil engineering from the University of Toronto. **W. H. M. Yaughlin** who succeeds Mr. Tennant is also a graduate in civil engineering from Toronto, where he has been a special lecturer.

**Col. W. C. Torrance** has resigned as city manager of Waco, Tex., and is succeeded by **James A. Bradner. Hubert Davis** has been promoted to water works superintendent, which position George J. Rohan resigned.

**George P. Green** has been appointed city engineer and superintendent of water works at Denison, Tex. For the last 4 years he has been connected with the U. S. Engineer Department on the Denison Dam project.

**Raymond L. Pike,** Indianapolis, Ind., has become district engineer for the Bureau of Community Facilities of the Federal Works Agency. He will supervise allocation of federal loans for public works planning in communities in Indiana and Kentucky. A civil engineer in Cleveland for 17 years, he served seven years as first assistant city engineer in South Bend, Ind., and five years as director of operations for the Indiana Works Projects Administration.

The War Department has announced the re-assignment of **Col. Kenneth M. Moore,** Corps of Engineers, who has

*CHARLES M. UPHAM, engineer-director of the American Road Builders' Association, and CARLOS DA S. LICHTENFELS, engineer, maintenance division, State of Sao Paulo, Brazil, listen to COL. MAURICE E. GILMOR of the Department of Transportation, Office of Inter-American Affairs. Mr. Lichtenfels is in the U. S. to study highway planning and latest highway machinery developed by manufacturers here.*

*T. COL. THOMAS F. RILEY (left) head f the engineer division, USMC, and LT. . H. McMANUS, USMCR, pause for a icture while inspecting new equipment. Col. Riley, recently returned from long ervice in the Pacific, is a holder of the oveted Legion of Merit. Lt. McManus s a former Detroit, Mich., contractor.*

rved for the past two years as district engineer of the San Francisco Enneer Office, to district engineer of the yracuse Engineering District, Syrase, N. Y. Under Colonel Moore's supvision, major military construction cluded: extensive improvements at amilton and Mills Fields, Benicia rsenal, Fort Ord, Camp Roberts, Tule ake Relocation Center; additions to acoast fortifications, river and harbor velopments, and completion of Dibble ospital at Palo Alto.

**rle S. Draper,** deputy commissioner the Federal Housing Administration, recently retired to open an office in Washington, D. C., as a housing and land planning consultant. He is a 1915 graduate of the Massachusetts State College. From 1933 to 1940 he was with the TVA as director land planning studies. From 1940, was with the Federal Housing Adinistration, first as assistant administator in charge of research and anatical studies, advance planning and efense housing, and later in war housg. Since July, 1943, as deputy comissioner, he was in charge of all field ffices and operations as well as of all ortgage servicing, rental housing and roperty management.

**D. E. Manigault,** Texas State Highway Department district engineer at Austin, has resigned after 26 years of service. He will be succeeded by **W. D. Dockery,** now district engineer at Del Rio, who in turn will be succeeded by **John Waller,** formerly at Yoakum.

**Clinton B. Graves,** formerly of Austin, Tex., has been named acting director of the Division of Sanitary Engineering, South Dakota State Board of Health, at Pierre. He succeeds **Maj. J. Hopkins,** who has held the position since 1944, under a loan arrangement with the United States Public Health Service, to which he is attached.

**Jay C. Gilman,** Ottumwa, Iowa, has been appointed city engineer for that city to succeed **Henry E. Cook,** who was given a leave of absence in the fall of 1942 to assist with the construction of the Ottumwa naval air station. Mr. Gilman has been a civil engineer with the Milwaukee R.R. Co.

Col. Lynn C. Barnes, district engineer, United States Engineer Office, St. Paul, Minn., has announced the appointment of **Lt. Warren H. Nord,** as an assistant to work on the Mississippi River and to assist in public relations work. Lt. Nord returned from Europe in April, 1945, after having been interned in Poland.

**C. C. Chambers,** Ohio engineer, has been named consultant to the technical and administrative staff of the Indiana flood control and water resources commission. He will work part time with the commission in making surveys and reports in connection with flood control and diversion in conjunction with the Corps of Engineers.

The new city manager of Milwaukie, Ore., is **Louis D. Kelsey,** who has been employed for the past two years as an engineer for the U. S. Maritime Commission in Portland, Ore., and previously had been city engineer for Raymond and Aberdeen, Wash.

**C. S. Munson,** formerly field engineer and construction superintendent for the city engineer's department at Aberdeen, Wash., has joined the B. H. Sheldon Construction Co. of Seattle, Wash., as chief engineer.

**Harry E. Fowler,** senior civil engineer and assistant superintendent of the city building department at Seattle, Wash., has retired after 31 years of service. For many years Fowler has been Seattle's chief technical officer in charge of enforcement of the city's building regulations.

**Frank E. Fahlquist,** formerly with the U. S. Engineer Office, Providence, R. I., and the Metropolitan District Water Supply Commission, Boston, Mass., has begun practice as a consulting engineer and geologist at Riverside, R. I. He is an engineering graduate of Brown University, 1923, and took a ScM degree there the next year. After a great deal of experience as an engineer and geologist, from 1936 to 1945 he was senior geologist and senior engineer, War Department, U. S. Engineer Office, Providence, R. I. He was engaged on work of the Connecticut Valley flood control projects, and military construction.

**Homer A. Hunter,** former waterworks superintendent of Dallas, Tex., has become assistant city manager and **K. F. Hoefle,** former engineer of construction and maintenance is acting superintendent of the waterworks department. Mr. Hunter, however, will continue to supervise the operation of the waterworks.

**R. E. Jamieson,** professor of civil engineering at McGill University, has resigned as director general of the army engineering design branch of Canada's Department of Munitions and Supply. He is succeeded by **N. G. Millman,** of Oshawa, Ont., who has been deputy director general for the last half-year.

*Trading his clerical dress temporarily for workman's overalls, REV. JOHN McINTOSH is engineer and contractor on construction of his own church in Rochester, N. Y. Rev. McIntosh studied civil engineering at the University of Nebraska before turning to the ministry, acted as construction superintendent to finance his classroom work. The $43,000 church building for the Christian and Missionary Alliance is three weeks ahead of schedule.*

# ENGINEERING SCHOOL NEWS

## Carnegie Tech. gets a $100,000 gift for its endowment fund—New "light construction" course at Colorado A. & M.

A grant of $100,000 has been made by the Pittsburgh Plate Glass Co. to the endowment fund of Carnegie Institute of Technology for the establishment of a scholarship fund.

This gift represents an important step forward in the current endowment fund campaign of Carnegie Tech. Until July 1, 1946, for every dollar raised by the institute up to $4,000,000, the Carnegie Corporation of New York will contribute two dollars, or $8,000,000, for Tech's general endowment fund. The new gift brings the total raised to date to $3,300,000.

To help supply an anticipated demand for men trained in the use of new types of building material in the post-war period, Colorado A & M College, Fort Collins, is offering this fall a new course called "light construction and marketing", according to Dr. L. W. Durrell, dean of the division of science and arts. The course combines the study of engineering subjects, wood products and business practices to provide a background for estimating and constructing with new building materials.

Reconversion of the curricula at the Georgia School of Technology from a wartime to a peacetime basis, because of Navy, Army and war training commitments, will not take place until the end of the 1945-1946 academic year.

Under a new system all dormitories will be put under one management, there will be only one commencement each calendar year, and regular students will be granted bachelor of science degrees in engineering at the end of their fourth year upon successful completion of prescribed courses. Students who spent part of their time in school and the other part in industry will be graduated at the end of five years. Students with high scholarship standings will have an opportunity to finish a complete engineering course in three years by pursuing prescribed courses during the summer quarters.

Harold Guthrie Dickie of Stewiacke, N. S., has been named professor of engineering at Mount Allison University, N. B. He is a graduate of Queen's University and formerly was chief engineer of the Canadian Car and Foundry C. Ltd., at Amherst, N. S.

Anton Huleman, Terre Haute, Ind., chairman of the Indiana Flood Control and Water Resources Commission, has given $1,000 to Purdue University for development of its sanitary research program. Announcement of his gift was made by Prof. R. B. Wiley, head of the school of civil engineering and engineering mechanics. An advisory committee on the sanitary research program at Purdue will be named.

## R. A. Monroe new chief design engineer for TVA

Robert A. Monroe has been appointed chief design engineer of TVA, succeeding George R. Rich who recently resigned to enter private practice. Mr. Monroe, who went to TVA early in 1937 from the U. S. Bureau of Reclamation, had previously served as assistant chief of the water control planning department and recently as assistant chief engineer. A graduate of the University of California, he has, since 1912, been engaged in the planning and design of hydroelectric plants. During World War I, he was overseas with the 4th Division as a captain in the Corps of Engineers.

## Fishery groups oppose Columbia River dam

Opposition to construction of a proposed dam across the Columbia River at The Dalles, Ore., was expressed by Oregon and Washington fishing industry representatives at a public hearing Sept. 22 at The Dalles. Included in the group were a number of Indians representing tribes that have treaty rights to fishing at Celilo Falls. They objected to destruction of their fishing grounds and indicated financial adjustment would not be satisfactory.

Other fishery groups protesting were the Columbia Basin Fisheries Development Association, the Oregon Fish Commission and the Washington Bureau of Fisheries.

Spokesmen for the vast inland territory that uses the Snake and Columbia rivers as an outlet for agricultural and manufactured products testified in behalf of the proposed dam.

## Harry Leeuw dies, N. Y. harbor builder

Harry A. Leeuw, 52, superintenden of construction for Allen N. Spoone & Son., Inc., contractors for harbor work in New York died Oct. 18 in New York City. He worked on the Hudson tubes of the Hudson and Manhattan Railroad Co. and the huge dirigible hangar at Lakehurst, N. J. For the Spooner organiz tion, he directed construction of piers underwater pipe and cable laying an other harbor construction.

Mr. Leeuw attended Cornell Univer sity and Cooper Union. He was founder and the first president of th Moles, New York construction men' organization.

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## One-day water famine in 27 New Jersey towns

There was a water famine in 27 Bergen County, N. J., towns for abou 12 hours on Oct. 15 on account of a break in a large water main near th New Milford pumping station of th Hackensack Water Co. Nearly tw thirds of the county's half millio householders woke up to find themselve without water for bathing, shaving drinking or cooking. Many schools ha to be closed, restaurants and barbe shops were unable to do business, ho pital service was impaired and man other services had difficulty in carryin on their normal activities.

The break occurred in a 24-in. main The pumping station pit was soo flooded to a depth of 18 feet. The wate flowed into the Hackensack River i such a torrent that the river overflowe its banks to the depth of a foot an the entire town of Milford was floode to the same depth. Fire engines wer summoned from near-by towns an pumped water out of the station. B noon four pumps had been restored t duty and water pressure was slowl built up during the day.

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The new 6-year improvement plan fo Pittsburgh, Pa., provides for no larg public buildings of any kind, but th City Planning Commission has told th City Council that about $4,900,000 year for the next six years should b spent on deferred and current mainte nance needs alone.

## OBITUARY

**Allen H. Young,** 93, died Oct. 6 in Salem, Ohio. A civil engineer, he had elped survey the Youngstown & Ohio River Railroad when it was built about 5 years ago.

**Alexander F. Boig,** 63, Melrose, Mass., for 13 years a structural engieer for the Massachusetts Department f Public Works, died Oct. 6 in Boston. e was a graduate of the Rhode Island chool of Design and of Brown Uniersity.

**Clarence L. Taylor,** 76, expert on peration and construction of cranes, nd vice-president of engineering for rms-Franklin Co., Youngstown, Ohio, ied Oct. 9. For 40 years he was with he Morgan Engineering Co., Alliance, ising from an apprentice draftsman to ice-president in charge of engineering. He supervised construction of various teel and rolling mills for Japan. He vent to Youngstown in 1938 as vicepresident in charge of engineering for he Aetna-Standard Engineering Co.

**William E. Kane,** 79, who died in Syracuse, N. Y., Oct. 11, was the inentor of a hoist bridge used for many ears at the Salina Street crossing of he old Erie Canal. It operated by ounterweights actuated by city water ressure. The idea was copied for undreds of other bridges.

**William DeForest Jones,** 79, retired onsulting civil engineer of Chicago, Il., died Oct. 13.

**George Mangus,** 62, Portland, Ore., uilder, died Oct. 9. He had contructed many churches and schools for he Catholic diocese in that area and lso a number of war plants.

**Harry E. Cotton,** 64, former city engineer of Omaha, Neb., died Oct. 12 Middleton, Ohio, where he had been onsulting engineer for the American olling Mills.

**Luke Day,** 67, superintendent of ighways on Cape Breton Island for the ova Scotia Highways Department, ied at Sydney, N.S., Oct. 8. At one me he had been inspector of public uildings for the Nova Scotia public orks department.

**Russell Fodrea,** construction engineer r the Glaser Construction Co. for 25 ears, died at Farmland, Ind., Oct. 14.

**Arthur V. Ruggles,** 62, a civil engineer attached to the water works division of the N. Y. State Public Service Commission, died Oct. 21 in New York City. A graduate of Dartmouth College in 1902, in the first World War Mr. Ruggles served as an Army Engineer, with the rank of captain, engaged on water supply. He was water commissioner of Cleveland, Ohio, 1922-23, and later was associated successively with the United States Cast Iron Pipe Co. and the Community Water Service. From 1926 to 1936 he was associate secretary of the American Water Works Association.

**Albert C. Ketler,** 73, founder of the bridge construction firm of Ketler-Elliott Co., Chicago, Ill., in 1907, and president of that company for the last 30 years, died Oct. 14. His firm constructed most of the bascule bridges spanning the Chicago River in Chicago, among them the Outer Drive, the Wabash Avenue, the Clark Street, the Wells Street, the Lake Street, the Madison Street and the Roosevelt Road bridges.

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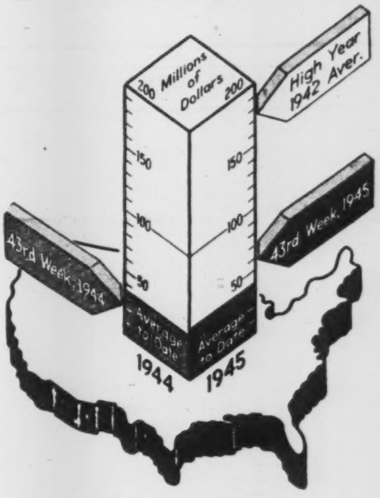
## Gen. S. C. Godfrey killed in Army transport crash

Brig. Gen. Stuart C. Godfrey, 59, of Washington, D. C., commanding general of Geiger Field at Spokane, Wash., was one of five men killed in a C-45 Army transport plane crash near Spokane on Oct. 19th.

General Godfrey was a graduate of West Point and the Engineer School, U. S. Army, and was commissioned in the Corps of Engineers in 1909. He had served thirty-six years in the regular Army with duty overseas in both world wars. His most outstanding contribution to World War II was the pioneer work he did as Air Engineer, U. S. Air Forces, in the development and organization of the Airborne Aviation Engineers with their bantam-weight equipment.

Aviation Engineers were first used in the invasion of North Africa in October, 1942. Their practicability was further demonstrated in the building of advance airfields in New Guinea and in the spectacular glider-borne invasion of Burma. Of that operation, Air Marshall Baldwin said in a telegram to Major General George Stratemeyer, Commanding General, Eastern Air Command, "Wingate and I think you should tell Godfrey that his Airborne Engineers are superb, repeat superb". General Godfrey was then Air Engineer, Air Service Command, India-Burma Theater, a position that he held from the fall of 1943 until July of this year.

## CONSTRUCTION ACTIVITY



As Reported This Week to...
*Engineering News-Record*

### CONTRACT VOLUME

**Continental U. S. Only**
**(Thousands of Dollars)**

| | Week of Oct. 25 1945 | Cumulative 1945 (43 wk.) | Cumulative 1944 (43 wk.) |
|---|---|---|---|
| Federal ..... | $6,886 | $694,467 | $978,480 |
| State & Mun.. | 12,734 | 301,276 | 214,427 |
| Total Public.. | $19,620 | $995,743 | $1,192,907 |
| Total Private. | 38,798 | 739,947 | 313,849 |
| U. S. Total... | $58,418 | $1,735,690 | $1,506,756 |

### WHERE CONSTRUCTION ACTIVITY ORIGINATED THIS WEEK

| Type of Work | Dollar Volume (Thousands) This Week | Cumulative 1945 (43 wk.) | Cumulative 1944 (43 wk.) |
|---|---|---|---|
| Waterworks .... | $2,955 | $45,335 | $27,624 |
| Sewerage ....... | 515 | 28,333 | 27,038 |
| Bridges ........ | 1,239 | 33,603 | 13,868 |
| Highways ...... | 4,748 | 187,009 | 173,359 |
| Earthwork, Waterways ........ | 1,322 | 45,228 | 59,131 |
| Buildings, Public | 7,731 | 428,073 | 567,439 |
| Industrial .... | 14,701 | 437,649 | 148,680 |
| Commercial .. | 18,796 | 205,062 | 120,687 |
| Unclassified .... | 6,411 | 324,744 | 368,939 |

NOTE: Minimum size projects included are: Waterworks and waterway projects, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

### NEW PRODUCTIVE CAPITAL

| | Cumulative 1945 (43 wk.) | Cumulative 1944 (43 wk.) |
|---|---|---|
| NON-FEDERAL ..... | $664,601 | $381,688 |
| Corporate Securities. | 169,996 | 96,970 |
| State and Municipal. | 331,005 | 143,778 |
| RFC Loans ........ | 24,600 | 57,940 |
| REA Loans ....... | 60,000 | 20,000 |
| Fed. Aid Highway.. | 79,000 | 63,000 |
| FEDERAL .......... | 1,049,898 | 1,263,800 |
| Total Capital ...... | $1,714,499 | $1,645,488 |

### ENR INDEX NUMBERS

| Index Base = 100 | | 1913 | 1926 |
|---|---|---|---|
| Construction Cost... | Oct. '45 | 309.28 | 148.67 |
| Building Cost...... | Oct. '45 | 240.35 | 129.93 |
| Volume ........... | Sept. '45 | 164 | 72 |

# CONSTRUCTION REPORTS

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*ELSIE EAVES, Manager* *DARWIN R. DAY, Statistics* *J. A. MAHONEY, Reports*

*(Daily service also available—Write for details)*

## WATER SUPPLY

**BIDS ASKED**

*Bids Asked October 29*

**N. Y., New York**—Comr. Water Supply Gas & Electricity, Municipal Bldg., Zone 7, hauling, laying water mains, appurtenances in E. 159 St., E. 165 and E. 172 Sts., Bronx Boro; 9 Ave., 34, 35, 54, 137, 214 and 215, 23 Terrace and in Whitestone Parkway, Queens Boro. Plans deposit $1 each.

*Bids Asked October 30*

**N. Y., New York**—Comr. Water Supply, Gas & Electricity, Municipal Bldg., Zone 7, hauling, laying watermains, appurtenances in Ave. N, 20 Ave., Bay 22, Bay 23, E. 95 and E. 101 Sts., 72 Ct. and in 20 Dr., Brooklyn Boro; Beach 11, Beach 43, Beach 55 and Beach 72 Sts., Dorian and Hollywood Courts and in Beach Channel Dr., Fifth Ward, Queens Boro. Plans deposit $1 each.

*Bids Asked November 14*

**N. Y., New York**—Bd. Water Supply, 120 Wall St., Contr. 359, furnishing, testing, del. alloy iron conical plug valves, connecting pipes and controlling mechanisms for operating chambers of the Delaware Aqueduct; Contr. 370, electric traveling cranes, appurtenances, electric hoist and chain hoist, trolley and appurtenances for operating chambers of Delaware Aqueduct. Plans deposit $5 each; adv. ENR 10/25.

*Bids Asked November 16*

**Ia., Marshalltown**—Bd. City Trustees, H. V. Pedersen, secy., WW imprvs., incl. 1 m.g. elevated steel tank, piping, etc. Over $20,000.

*Bids Asked November 20*

**Ill., Chicago**—Dpt. P. Wks., City Hall, electrical work—11, South District Filtration Plant. Plans deposit $50.

**Mich., Detroit**—Bd. Water Comrs., Water Bd. Bldg., 735 Randolph St., approx. **14,365** lin. ft. 36- to 48-in., watermain, appurtenances, etc., Contr. WS-3A; 19,167 lin. ft., 36- to 54-in. watermain, appurtenances, etc., Contr. SW-2. L. G. Lenhardt, genl. mgr. and ch. engr.; adv. ENR 10/25.

**LOW BIDDERS**

**Calif., Oakland**—East Bay Municipal Utility Dist., 512 16 St., Oct. 17, furnishing, constructing approx. 9,200 ft. 36 in. cement-lined, gunite-coated steel pipe for distr. sys., from Steel Tank & Pipe Co., 1100 4 St., Berkeley, **$82,887.** CD 10/11.

**Mich., Jackson**—State, State Prison of Southern Michigan, Jackson, Oct. 3, 1½ m. g. rein.-con. ground level reservoir, pumphouse, from Miller Thompson Co., Jackson, **$114,985.** Fargo Engineering Co., Jackson, engr.

**N. C., Angier**—Town, J. E. Dupree, mayor, rejected bids Oct. 17, WW imprvs., iron removal plant, appurtenances. Will readvertise. Pierson & Whitman, Security Bank Bldg., Raleigh, consult. engrs. CD 10/12.

**O., Defiance**—City, City Hall, Sept. 28, WW imprvs., Contr. A, repairing and installing equip. at water filtration plant, from Hannagan Bros., Bloomfield Ave., Urbana. Est. **$30,000.** Finkbeiner, Pettis & Strout, 1010 Home Bank Bldg., Toledo, engrs. CD 9/12—ENR 9/20.

**Ore., Portland**—City, G. W. Yates, city purch. agt., Oct. 19, 36 in. welded steel pipeline from S.E. 60 to Washington Park Reservoir, from American Pipe & Constr. Co., 518 N. E. Columbia Blvd., **$440,716.** Est. $400,000. CD 10/9—ENR 10/11.

**R. I., Pascoag**—Pascoag Fire Dist., District Office, Pascoag, Oct. 16, water supply extens., incl. pump. station and 8 in. watermain connection, from F. Weston, P. O. Box 1070, North Attleboro, Mass., **$21,890.** CD 10/9—ENR 10/11.

**Tex., Dallas**—Dallas Co. Water Control & Imprvt. Dist. 3, City Hall, Oct. 12, water imprvs., from Ben Sira & Co., 3901 Elm St., Dallas, **$203,430.** CD 1/15—ENR 2/25, under Postwar Projects.

**Tex., Houston**—City, M. H. Westerman, secy., City Hall, Oct. 10, 24-in. watermains in Navigation Blvd., Everton, Engelke, N. St. Charles, Bastrop and Commerce Sts., from Anderson Constr. Co., Esperson Bldg., Houston, **$126,500.**

**†Alaska, Anchorage** — Alaska Railroad, Dpt. Interior, Anchorage, rejected bids Oct. 4, pump house, supply facilities, 1,000 gal. elevated steel tank, lateral extens. CD 9/26.

**CONTRACTS AWARDED**

**Calif., Hayward**—City, City Hall, pipeline to water plant, to McGuire & Hester, 796 66 Ave., Oakland, **$15,250.** J. Mancini, city engr.

Location of ENR Correspondents

### *Symbols and Abbreviations Include:*

| | |
|---|---|
| † | Federal Government |
| ★ | Project of $500,000 or over |
| **ENR** | Engineering News-Record |
| **CD** | Engineering News-Record Construction Daily |

### *Projects—By Size*

Construction projects here reported cover the United States and Canada, are of these minimum sizes or larger; water supply, earthwork, waterworks, $15,000; other public works, $25,000; industrial buildings, $40,000; other buildings, $150,000.

### *Classes of Construction*

(Name in order of Listing)

Water Supply
Sewers, Waste Disposal
Bridges
Streets & Roads
Earthwork, Waterways
Latin America
Public Buildings
Commercial Buildings
Industrial Buildings
Unclassified

### *Stages Reported*

PROPOSED: (except Streets & Roads);
BIDS ASKED (new announcements only). For full calendar, see also preceding issues of ENR);

LOW BIDDERS: On jobs below $500,000 value all low bidder news will be the final reports published on the projects involved except where award is not made to the low bidder. In this case, a supplementary contract award report will be published.

CONTRACTS AWARDED: Except awards to low bidders previously reported in low bidder stage.

Dates shown are of issue in which last previous report was published.

★ **Conn., Norwalk**—First Taxing Dist. Water Comr., 74 Wall St., Norwalk, dam and reservoir, Silvermine Section, to E. W. Foley, Inc., 16 Court St., Brooklyn, 2, N. Y. **$939,240.** CD 9/21—ENR 9/27, under LB.

**Ill., Mattoon**—City, J. G. Goetz, supt., Municipal Water Dpt., 1201 Marshall St., concrete dome covers for 88 and 95 ft. diam. water storage tanks, to Cement Gun Co., Allentown, Pa., **$24,665;** 31,400 ft. 8- to 16-in. c.i. cement-lined water mains, 3 well pump houses, ¾ mi. roads to new wells etc., to E. Gust, Oshkosh, Wis., **$160,000.** CD 9/14, 8/13—ENR 9/20, 8/18.

**Kan., Beloit**—City, A. W. Pfaff, clk., dam repairs on Solomon River, to Martin K. Eby Constr. Co., 311 E. Murdock St., Wichita, **$38,888.** Bids 10/2. Burns & McDonnell Engrg. Co., 107 W. Linwood Blvd., Kansas City, Mo., engr.

**Minn., White Bear Lake (br. St. Paul)**—City, Mrs. Esther Stickley, clk., Contr. 1, furnishing, installing watermains, to DeGraff Wolff, 2176 Wellesly Ave., St. Paul, **$14,514.** Bids 10/9. Bids rejected, project 2, pump. station, L.B. **$22,375.** CD 9/19—ENR 9/27.

**O., Salem**—City, 3 m.g. water reservoir, to Gallagher & O'Horo Co., 1818 Wilson Ave., Youngstown, **$71,165.** Awarded 10/16.

**O., Toledo**—City Waterworks Div., cement relining approx. 9,000 lin. ft. c.i. water piping in Cherry St.—Central Ave. area, to Centriline Corp., 140 Cedar St., New York, $29,1 Est. $29,000. Bids 10/9, awarded 10/18. CD 10/2—ENR 10/4.

**Ore., Dallas**—City, City Hall, reconstructing water sys. with 7 mi. 4- to 10-in. pipe, day labor, **$70,000.** W. L. Soehersen, city water mgr. CD 10/8—ENR 10/18.

**Ore., Eugene**—City, City Hall, replacing 82,000 ft. 6-to 24-in. watermains, day labor. **$270,000.** J. W. McArthur, genl. supt. Water Bd. CD 8/1—ENR 8/9, under Postwar Projects.

**Ore., Salem**—City, City Hall, 10 m.g. reservoir, day labor, **$175,000.** C. Gunther, Water Dpt. mgr. CD 10/8—ENR 10/18.

**Tex., Baytown—Harris Co.** Water Control Imprvt. Dist 7, Dr. Wm. Marshall, pres. Baytown, water and sewer imprvs., to G. Mora, 312 Sabine St., Houston, **$99,100.** Est. $85,000. Awarded 9/28. CD 9/7—ENR 9/11, under LB.

**Tex., LaPorte**—Ira J. Allen and W. H. Clark, Sterling Bldg., Houston, c.i. water lines, etc., own forces, **$15,000.** CD 9/6—ENR 9/20, under Postwar Projects.

**Tex., Lubbock—Texas Technical** College, W. G. Gaston, bus. mgr., Lubbock steel water tower and tank, 100,000 gal. capacity, to Pittsburgh-Des Moines Steel Co., Praetorian Bldg., Dallas, **$15,600.** Awarded 10/13. W. G. Hedrick, 1st National Bank Bldg., Fort Worth, engr.

**Tex., San Saba**—City, W. M. Campbell, mayor, City Hall, WW imprvs., to B. & M. Constr. Co., Petroleum Bldg., Oklahoma City, Okla., approx. **$15,000.** Bids 10/15. CD 9/25—ENR 9/27.

**†Wash., Bremerton—Yards & Docks**, Annex, Navy Dpt., Arlington, Va., watermains for fire protection at Piers 1 and 2, Naval Ammunition Depot, Spec. 16832 NOY 12626, to University Plumbing & Heating Co., 394 University Way, Seattle, **$16,100.**

**Alta., Mercoal**—McLeod River Hard Coal Co. Ltd., Mercoal, water tower and piping, to Wilson & Wilson, Edmonton, **$30,00** CD 6/15—ENR 6/21.

**N. B., Milltown**—Municipality, W. H. Kirk, clk., Milltown, watermains, to Raynor Constr. Co., 7 St. George St. Est. **$30,000.** CD 7/10—ENR 7/12.

**Ont., North Demfries (P.O. Toronto)**—Municipality, installing watermains, house services, to Scott-Jackson Constr. Ltd., Evans Ave., Etobicoke, **$40,000.**

**Ont., Ottawa**—Dpt. Veterans Affairs, Ottawa, watermains, sewers, Nepean Twp., to Storms Contracting Co. Ltd., 40 Givens St., Toronto, est. about **$75,000.** CD 8/30.

**Que., Hull**—City, H. L. Leblanc, clk., watermains, house connections for Proj. housing unit, to W. H. Kelly, 56 Bridge St., about **$40,000.** Bids 9/17. CD 9/11—EN 9/13.

## SEWERS, WASTE DISPOSAL

**BIDS ASKED**

*Bids Asked October 29*

**N. Y., Brooklyn**—President Brooklyn Boro, Boro Hall, Zone 2, combined sewer in Ave. from E. 91 St. to Remsen Ave.

**Ont., Wallaceburg—City**, J. A. Lillie, mayor, 6 mi. 8-to-12-in. **sewers**, 2 pump stations, $180,000. Gore & Storrie, 11 **Bay St., Toronto, engrs.**

*Bids Asked October 31*

**N. Y., Kew Gardens**—President Queens Boro, 120-55 Queens Blvd., Zone 15, combined sewer 72 and 76 Aves., 152, 164 16 166 and 168 Sts.; sanitary sewer 125, 25 110 and 144 Rds., 169, 168, 160 (Terry), 20 and Colfax Sts., Hillside, 111, 144, 142, 1 Cross Island Parkway, 85 Rd., 110, 85 and Dabney Aves.; seepage basin northwest corner of 203 St. and 43 Ave.; combined trunk sewer 80 and Kildare Rds., Union Turnpike, Kent St.

*Bids Asked November 1*

**Tex., Ennis**—City, c/o Secy., Ennis, sanitary sewer exten. Plans deposit $10. Koch & Fowler, 701 Great National Life Bldg., Dallas, engrs.

*Bids Asked November 2*

**Wis., Granville (P.O. Milwaukee)**—Tow of Granville, 7717 W. Good Hope Rd., Mi 9, 5,694 ft. 8 in. vitr. clay sanitary sewers N. 60 St., W. Villard Ave. and Bradley Rd. Over $25,000. Steinhagen & Steinhagen, 2735 W. State St., Milwaukee, Zone 8, eng

*Bids Asked November 5*

**Mich., Croswell—City, J. M.** McIntyre, **clk., City Hall, 3,230 ft. 8 in. sewer,** **manholes, 11x11x23 ft. rein.-con.** sewa

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